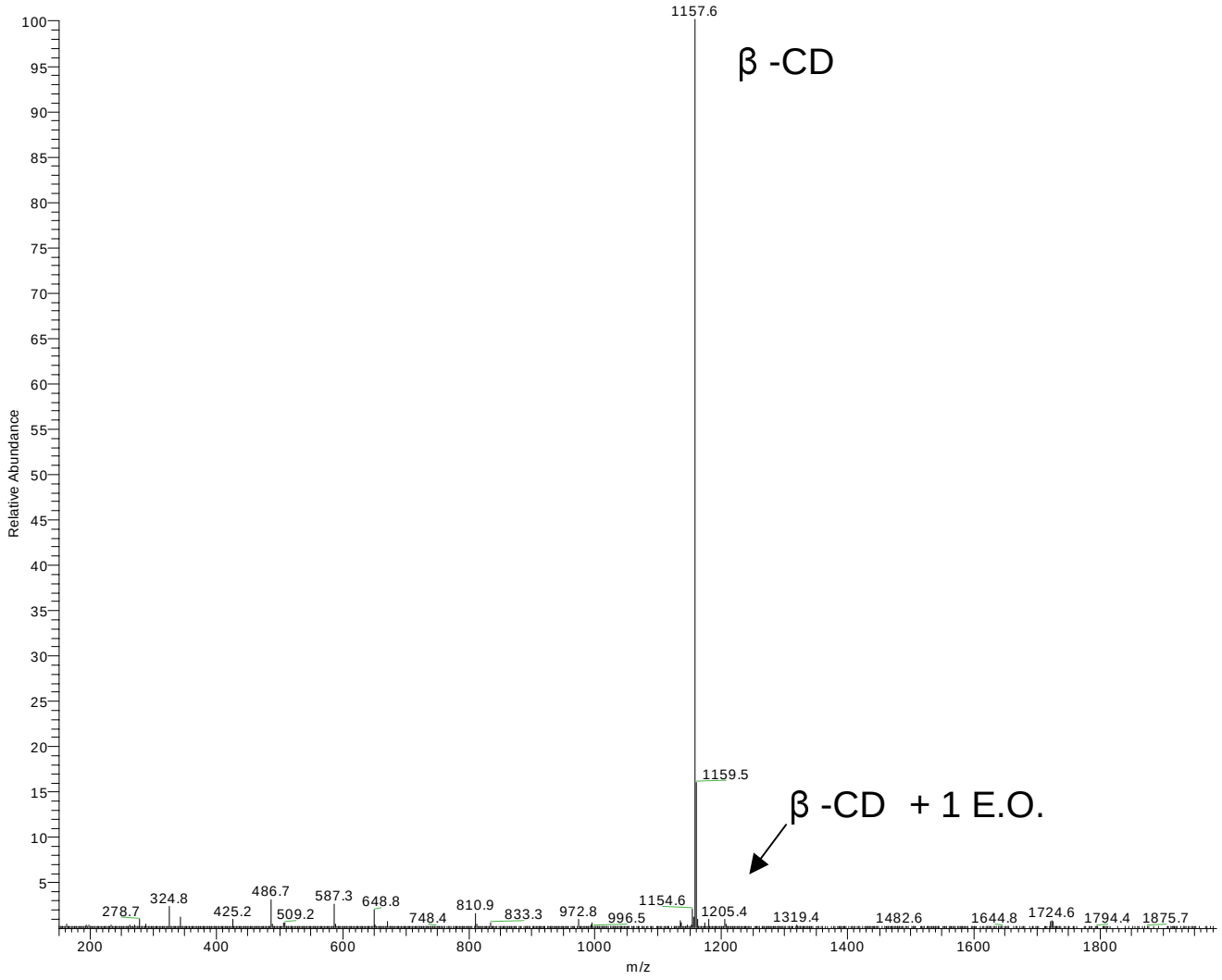
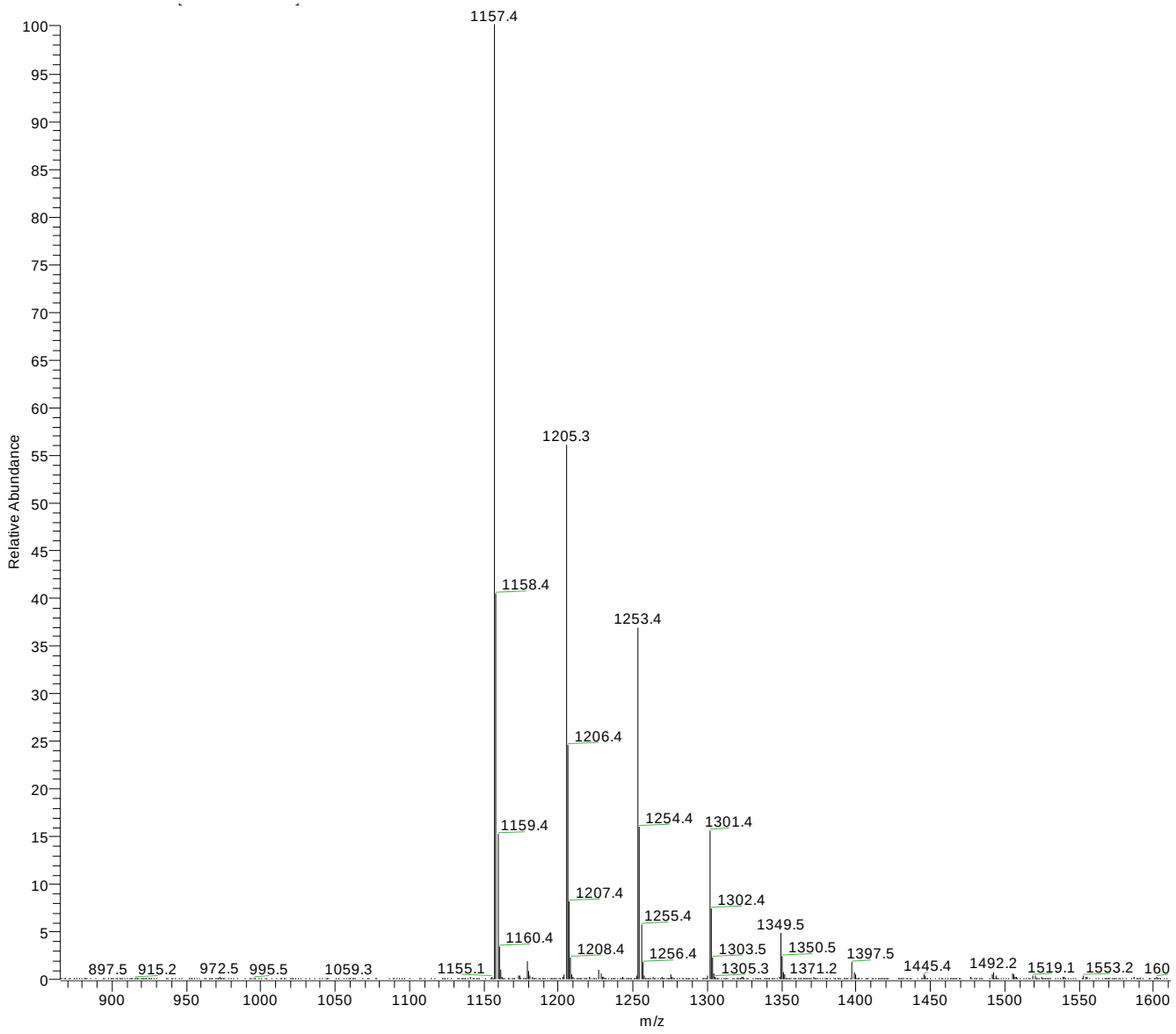
Supporting Information

ESI/MS analysis of β-CD that was not dried and treated with EO-d4.



ESI/MS analysis shows a clear decrease in the level of labeling, as indicated by the prominent β-CD peak at 1157, at shorter reaction times as shown below.

ESI/MS of β-CD after 2 minutes of treatment with EO-d4.



A TLC analysis was done to ensure that there was no ethylene glycol caused by the quenching of EO with residual water in the labeled polymer.

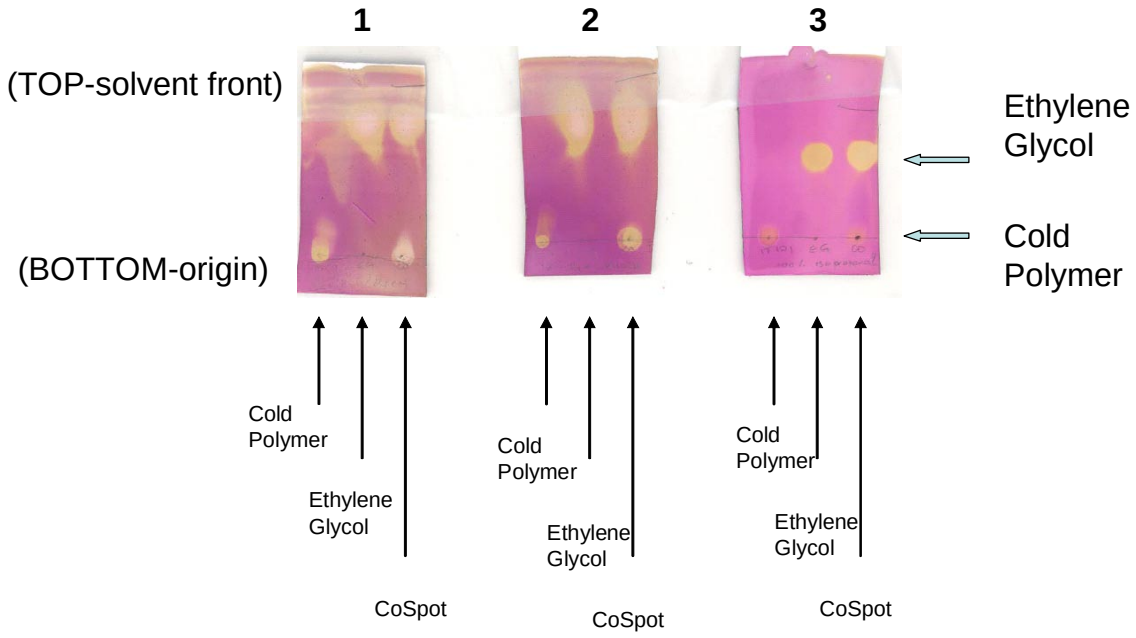
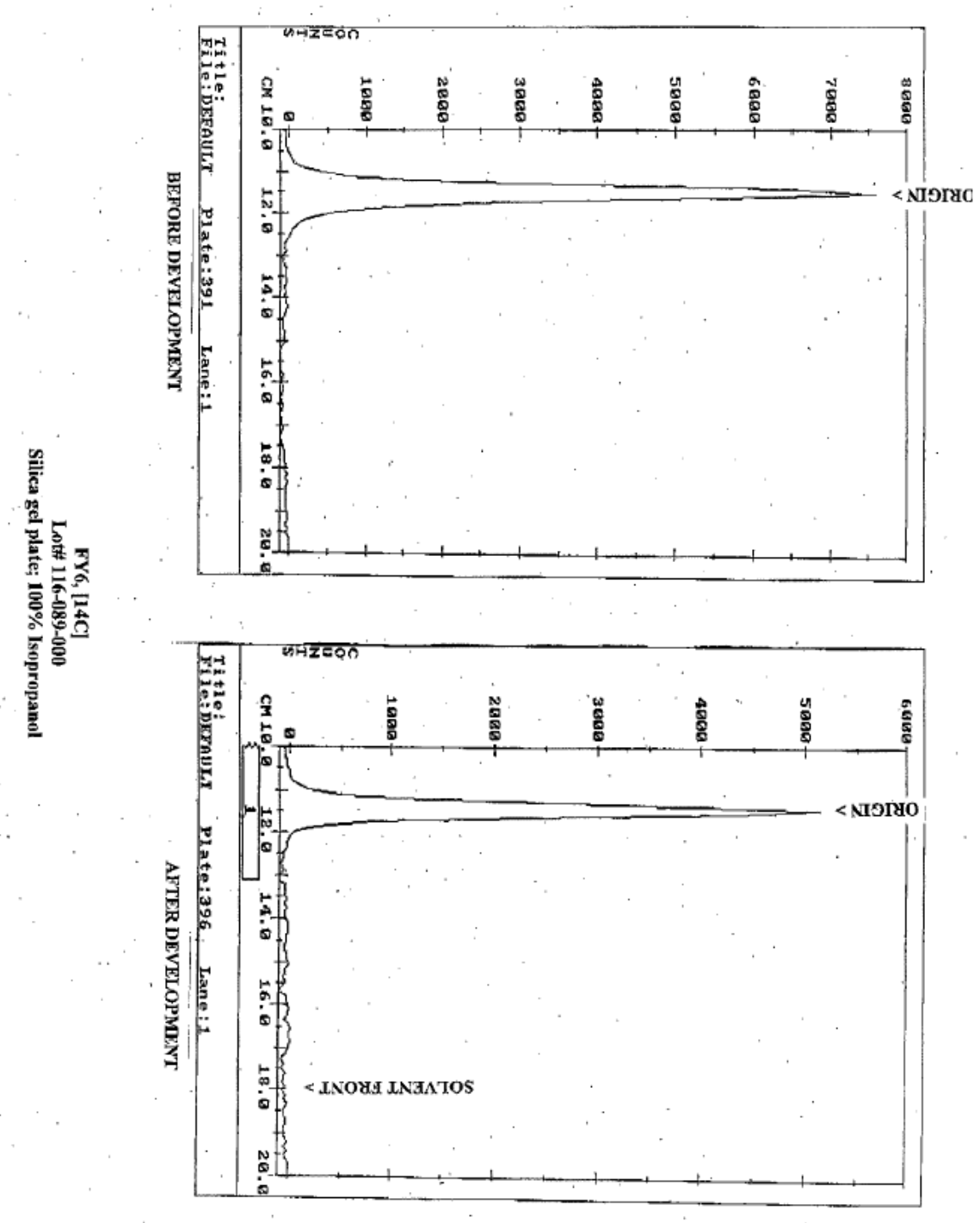


Plate **1** was run in 40%H_2O:60% MeCN

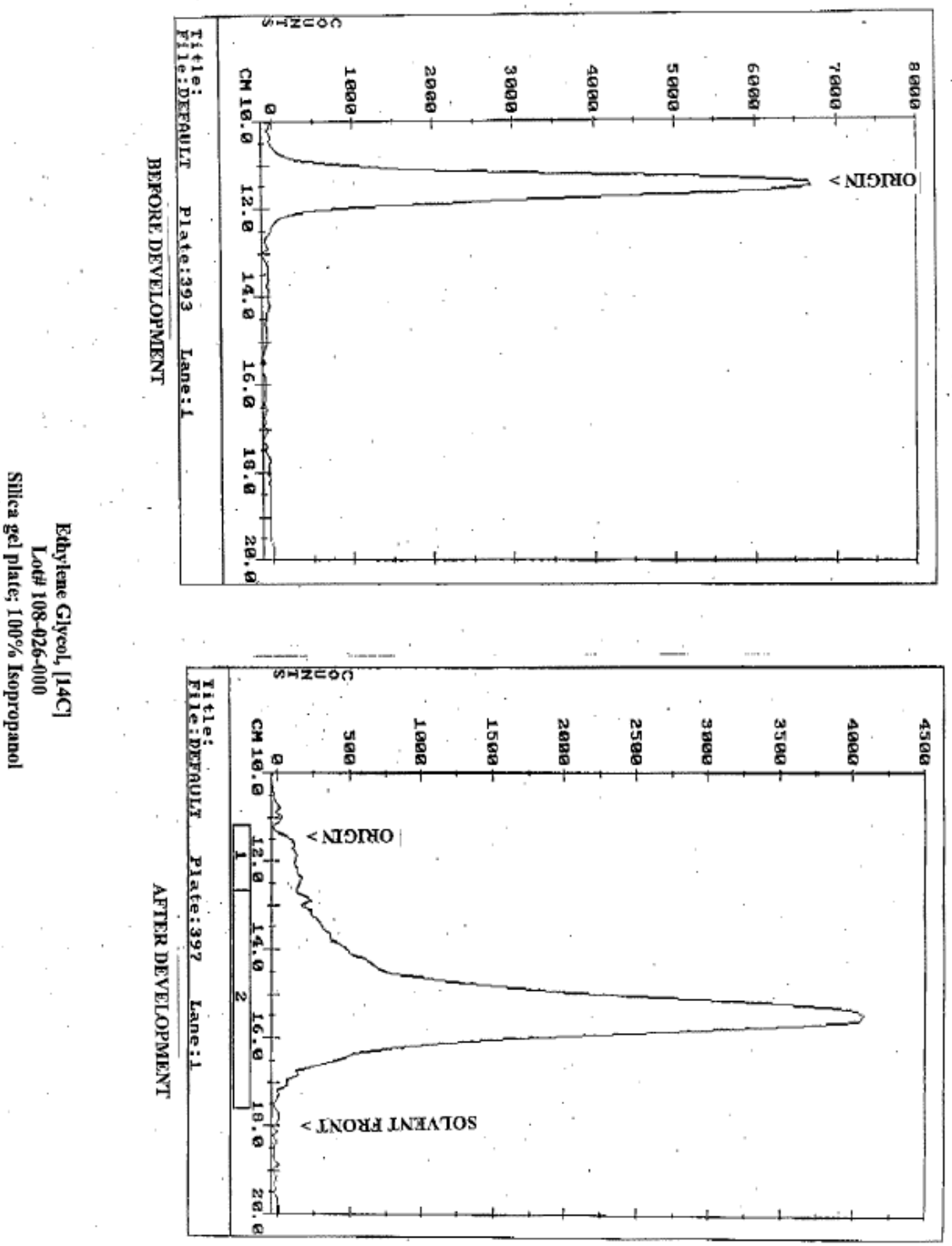
Plate **2** was run in 10%H2O:90% MeOH

Plate **3** was run in 100% Isopropanol

Radioscan of TLC plate with ^{14}C ethylene oxide reacted IT-101

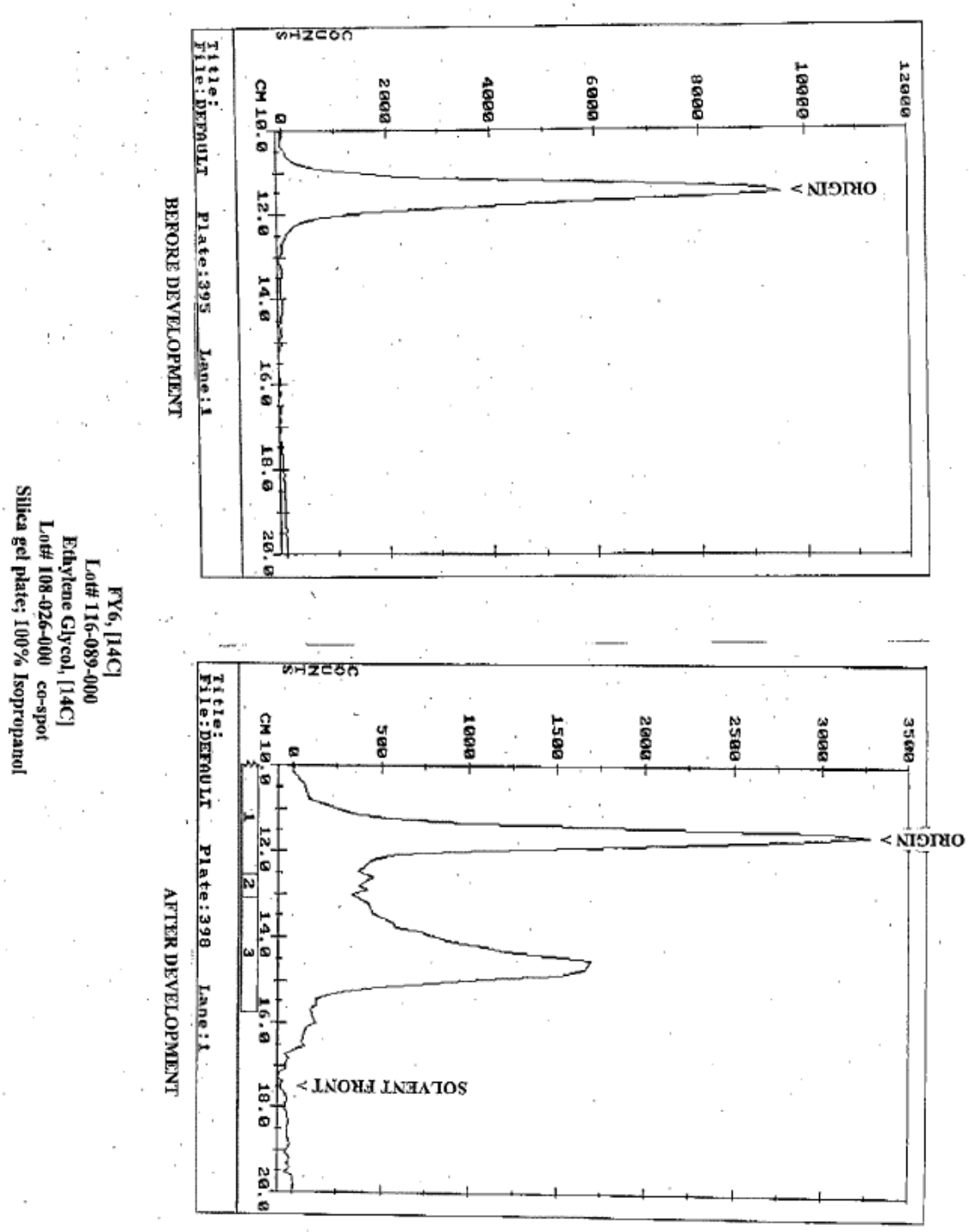


Radioscan of TLC plate with ^{14}C ethylene glycol



Ethylene Glycol, [14C]
Lot# 108-026-000
Silica gel plate; 100% Isopropanol

Radioscan of TLC plate with ^{14}C ethylene oxide and ^{14}C ethylene oxide reacted IT-101 co-spotted



FY6, [14C]
Lot# 116-089-000
Ethylene Glycol, [14C]
Lot# 108-026-000 co-spot
Silica gel plate; 100% Isopropanol